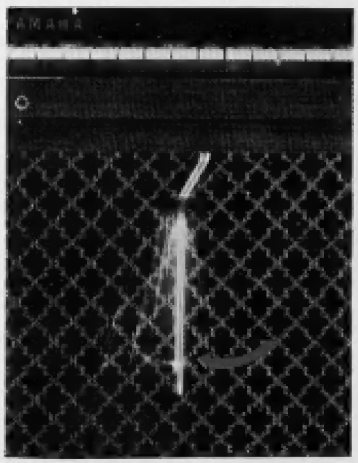
Other Controls

Knee Lever : ⓪

The metal lever folded horizontally under the keybed is the Knee Lever. This lever, when pulled down for use, allows control of Upper manual sustain effect in conjunction with Upper Sustain Control ㉑ . (See page 13).
Upper Sustain Control is used for maximum setting, while the Knee Lever is operated with the right knee for passage-by-passage or even phrase-by-phrase Upper Sustain control precision during the performance.



Master Volume : Ⓜ

The control determines the maximum volume obtained from the Electone and can be varied as desired.

Expression Pedal : Ⓡ

Expressive shading within each phrase, and accenting of individual notes can be achieved with this pedal, within the overall range set by the Master Volume Control. A full explanation will appear on page 27.

Stunning furniture design, roll-top fallboard with lock & key

Keeps out dust, little hands and pets, etc., when the B-12 is not in use. Also complements the design with its rich, matched wood exterior to blend with the most distinctive decor.

To Fully Enjoy Your Electone • • •

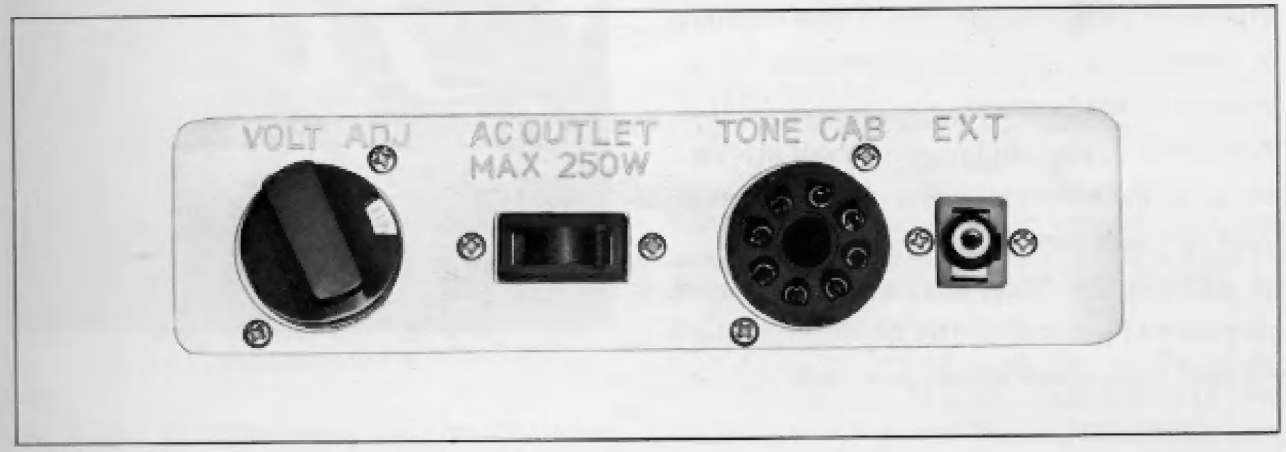
Besides many tone levers and effect controls through which almost infinite varieties of voice and expression can be obtained, the Yamaha Electone B-12 offers you some extra special features to further enhance your playing pleasure.

Headphone Jack

Plug a headphone set (optional accessory) into the jack under the keyboard and you can play with the volume as high as you like without disturbing anyone, even in the middle of the night.

Tone Cabinet Socket

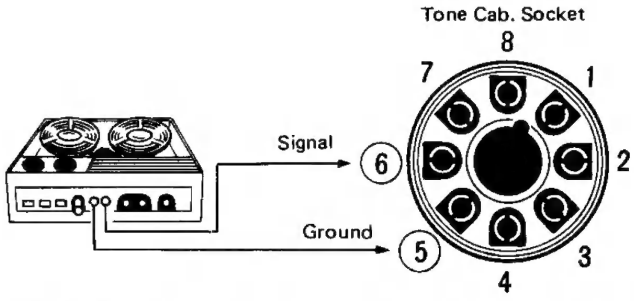
This socket is available at the lower lefthand corner of the back of the Electone. (See the photo below.) It allows you to connect a Yamaha Tone Cabinet equipped with Yamaha Natural Sound speakers will give increased tonal power and stereophonic effect.



Recording

When it is desired to record your performance, the use of the tone cabinet socket will provide a much clearer, higher fidelity tape than will a microphone. To connect a tape recorder to the US-type socket (see Fig. 1), obtain a US-type plug and connect the signal terminal of the tape recorder 'record' plug to terminal #6 and the ground terminal to # 5.

(Fig. 1)



Note: Be sure to adjust the recording level of the tape recorder to the most suitable level before recording.

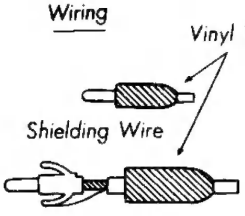
External Input Jack

This jack is located to the right of the tone cabinet socket. It allows you to connect a tape recorder, record player or radio directly, using the amplifier and Natural Sound speaker of the Electone. Thus these external inputs will come to life under Natural Sound reproduction and give you an opportunity to broaden your musical experience.

Since their tones are not controlled by the expression pedal, you can play a tape recording or record of an orchestral concert and 'sit in' yourself on the Electone.

Alternatively, you can record yourself playing a piano or the Electone, replay the tape, and be your own duet partner.

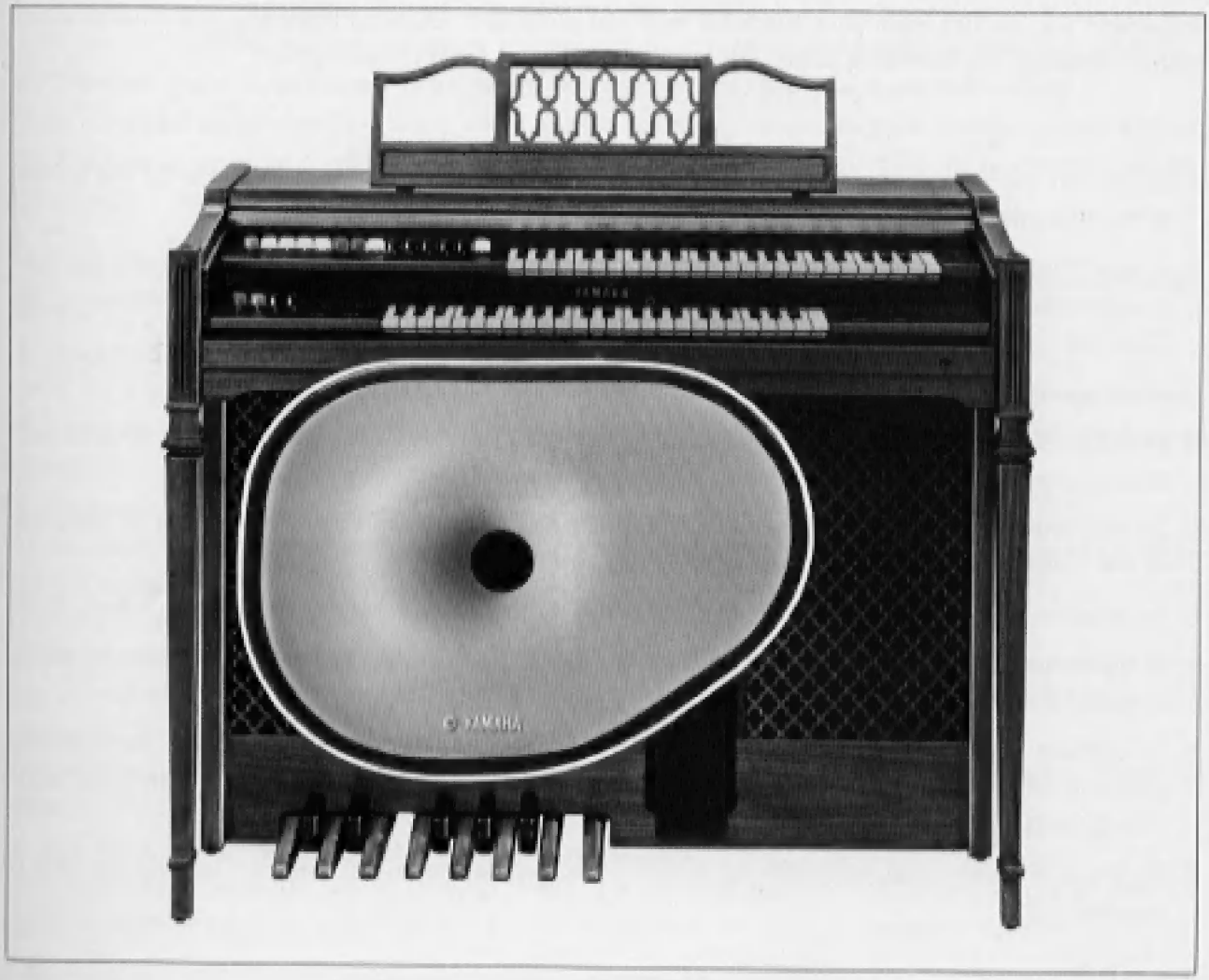
In addition, the 'Mini Pops', a rhythm cabinet distributed by Yamaha, may be connected here for even more advanced percussion effects.



Note:

1. **Connect the EXT. IN Jack and the output jack of a tape recorder with shielding wire. Use a spare plug inserted in the EXT. IN Jack.**
2. **Volume setting for playback tends to differ with the make or model of tape recorder.**
3. **Adjust the volume of the Electone and the tape recorder to avoid distortion of the sound quality.**
4. **Make absolutely sure never to touch or otherwise interfere with the circuits or internal elements of the Electone.**

A Word about Yamaha's Exclusive
Natural Sound Speaker



In this age of electronic marvels, we are accustomed to speakers which offer 'only X% distortion' or 'high fidelity throughout the range; One almost gets the feeling that human perception is left out in the search for technical perfection.

And if you examine the 'tonal characteristics curve' of a violin, or of a cello, or piano or organ, you will realize that this is exactly what has happened. The natural imperfections which are the emotion and the power of live performance will obviously elude the scientists' intent on mathematical exactness and symmetry.

We at Yamaha believe that music must satisfy the man, not the equation. This is why we have built the Natural Sound speaker.

Here is a speaker which is not symmetrical. It is not a cone, nor a horn nor any other conventional shape. It consists, in essence, of a diaphragm with a fixed edge, the whole surface of which vibrates according to the principle of multi-dimensional flexion.

The shape is derived from that of the piano soundboard, and like the soundboard of any other musical instrument, it is 'imperfect'. Like your ear and like everything else in nature, it follows no pat formula, it obeys no regular rule. It is not a Hi-Fi speaker, for what musician wishes to be faithful to someone else's concept of sound?

Surely the musician, as a creative artist, deserves a sound system which is designed for the human ear; designed for Nature; designed not for reproduction but for creative musicanship. We believe the Natural Sound speaker fulfills this aim.

Care of Your Electone

In general you should treat your Electone with the same care you would give any fine musical instrument. However, the following points are suggested to assure optimum enjoyment.

1. Be sure to use your Electone only on the correct voltage. If it is necessary to change the voltage of the Electone, please consult your Yamaha Electone service agent.
2. If any trouble develops, contact your Yamaha Electone service agent. In any case make absolutely sure never to touch or otherwise interfere with the circuits or the internal elements of the Electone.
3. When you have finished playing, be sure to turn off the power switch.
4. In order to clean the plastic keys, tabs, etc., use a damp cloth. Never apply organic solvents such as alcohol as it may result in damage to the plastic materials used.
5. Do not expose the Electone cabinet to the direct rays of the sun, as this may result in bleaching of the finish of separation along the joints of the wood.
6. Be absolutely sure never to strike or scratch the surface of the organ cabinet with a hard stuff.
7. It is also advisable to place the Electone in such a way that it is not exposed to excessive humidity or currents of heated air.
8. In opening and closing the fallboard, grasp the handle with both hands and slide the fallboard gently in its groove. Never attempt to raise the fallboard directly upwards and do not place heavy objects on it.
9. During a thunderstorm turn off the Electone power switch by all means. Unplug the unit if possible.

Do not Be Alarmed If...

1. A note should sound the instant you turn on the switch.
This merely indicates normal operation consequent to a flow of electricity in the main amplifier.

2. Only one note is produced even when two pedals are depressed simultaneously.
When the pedal sustain effect is used, notes overlap following notes. In order to achieve tonal clarity, the Electone is designed so that a note is electronically suppressed the instant the next note is struck. If two pedals are struck simultaneously, only the higher one sounds.

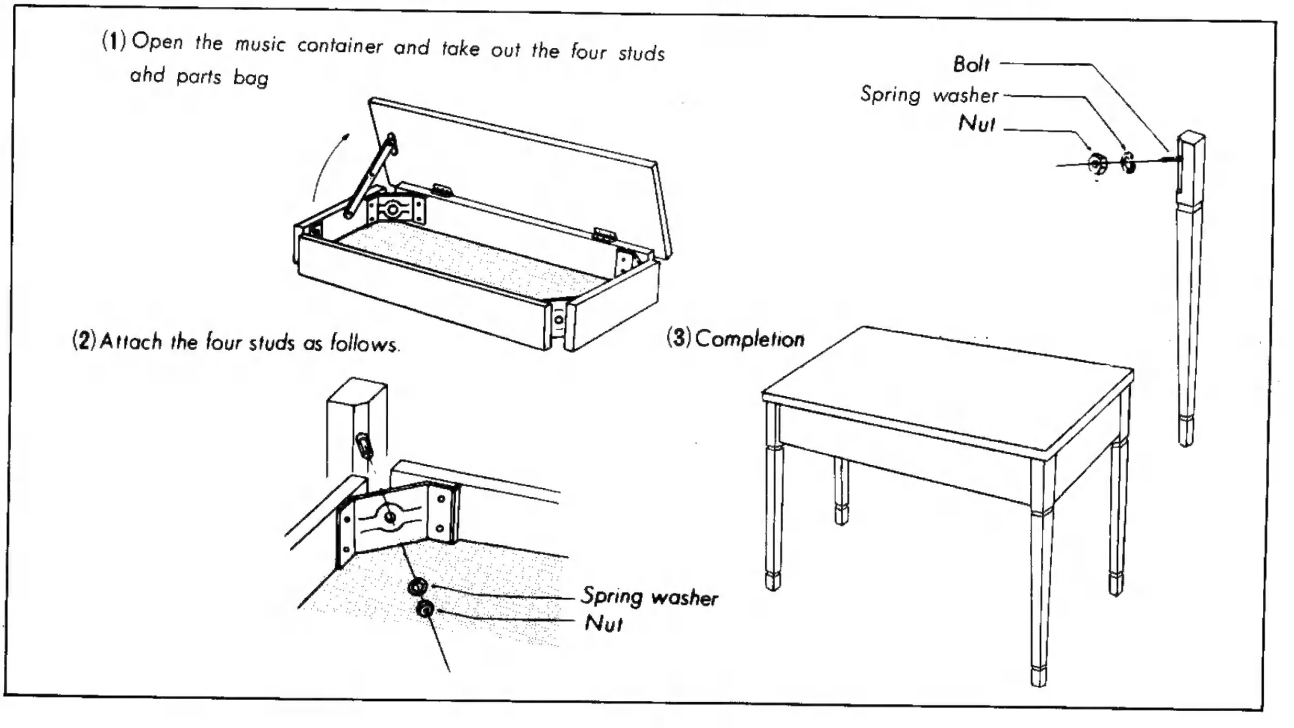
3. Flute $2\frac{2}{3}$'voice is not obtainable from keys above F in the highest octave.
This means that the highest note which the Electone B-12 can produce is c5. (See the Compass chart on page 7.)

4. Neighboring objects resonate.
Since the Electone produces a continuous stream of sound, windows, china or other such objects may be found to resonate. To prevent this, reduce the volume of the Electone or take steps to remove resonance.

5. Occasional unpleasant static.
In the majority of such cases, the cause can be traced to the turning on or off of refrigerators, washing machines, electric pumps or other household appliances. Electrical fault in a neighboring outdoor neon sign may also be to blame.
When the cause is a home appliance, connect the Electone to an outlet as far as possible away from the offending appliance. This phenomenon, although perhaps annoying, poses no danger to the Electone's circuitry.
If the cause is a fault in neon or fluorescnet lighting fixtures, the fault should be repaired. When the cause is unknown, or in case of doubt, contact your Yamaha dealer.

6. The Electone reproduces radio or TV sound signals.
This kind of phenomenon can occur when there is a powerful radio or TV transmitter, or an amateur radio operator located in the vicinity. If this situation is distracting, contact your Yamaha dealer.

HOW TO SET UP THE BENCH



Specifications of B-12 Series

KEYBOARDS
- Upper Manual 44 keys f~c4 (3⅔octaves)
- Lower Manual 44 keys F~c3 (3⅔octaves)
- Pedals 13 keys C1~C (1 octave)

TONE LEVERS
- Upper Manual Flute 16′
- Flute 8′
- Brass 8′
- Oboe 8′
- String 8′
- Flute 4′
- Flute 2⅔′
- Lower Manual Wood 8′
- Horn 8′
- Cello 8′
- Wood 4′
- Pedals Bass 16′
- Bass 8′

EFFECT LEVERS
- Vibrato
- Repeat Speed (Upper)
- Pedal Sustain

PERCUSSION LEVERS
- Lower
- Pedal

EFFECT CONTROLS
- Brilliance
- Upper Sustain
- Reverb
- Manual Balance

TREMOLO SELECTORS
- Voice (Main/Rotary)
- Tremolo
- Chorus

AUTO RHYTHM SECTION
- Rhythm Selectors
  - Swing Bossa Nova
  - Waltz Rhumba
  - Slow Rock Beguine
  - Jazz Rock Cancel
- Rhythm Controls
  - Rhythm Start
  - Synchro-Start
  - Tempo
  - Volume
- Tempo Indicator Lamp

OTHER CONTROLS
- Master Volume
- Expression Pedal
- Knee Lever
- Power Switch
- Pilot Lamp

OTHER FITTINGS
- Headphone Jack
- External Input Jack
- Tone Cabinet Socket
- Music Rest
- Roll-top Fallboard
- Matching Bench with Music Storage Space

NATURAL SOUND SPEAKERS
- Main: JA-5002 50 x 68 cm (20 x 27″)
- Rotary: JA-1701 16 x 23 cm (6½ x 9″)
  Electro-control 2-speed
  with continuous tremolo speed control

CIRCUITRY
- Solid State (Incl. ICs and FET)
- Main Amplifier: SEPP
- Output Power: 30 Watts
- Power Consumption: 120 Watts
- 100/110/117/125/220/240V AC
- 50/60 Hz

DIMENSIONS
- Width: 112 cm (44″)
- Depth: 57 cm (22″)
- Height: 91 cm (36″)

WEIGHT 66 kg (145 lbs.)

Playing the Yamaha Electone

Posture

1. Sit in the middle of the seat somewhat towards the front. The weight should be shifted slightly to the right in order to allow the left leg greater freedom of movement.

2. The right hand generally fingers the upper manual *(melody)* and the left hand fingers the lower manual *(harmony)* while the pedals *(rhythm)* are played with the left foot. Check that you can reach all the keys on the three keyboard conveniently.

3. Relax the muscles of the left leg, and with the knee joint loose, move the foot left and right. Keeping the ankle loose, push the pedals just short of the black pedals.

4. Relax the right ankle and place the full length of the foot onto the Expression pedal. Check that you can push the pedal down fully with comfort, and that you are equally comfortable at all positions of the Expression pedal.

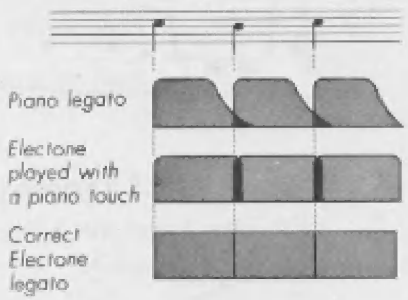
Technique

How to Play the Manuals

Clench both fists and then relax extending the fingers naturally. This form allows the fingers to move more quickly and easily, and is therefore applicable to all keyboard instruments.
Correct use of the fingers is essential to play a beautiful Electone music. The melody part should in general be played with ***the organ legato touch***. In order to achieve the legato playing it is necessary to poise the finger in readiness above the key to be struch next. Many rules may be applied to the correct fingering, but in any case a most economical and rationalized use of the fingers is desirable.

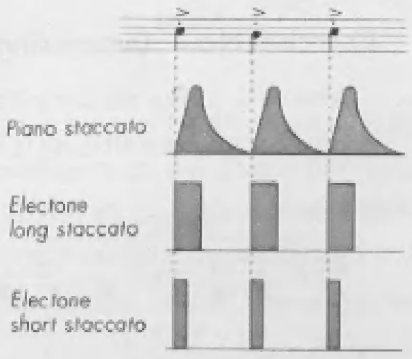
Legato

1. It is important to practice to achieve the organ touch that will produce a smoothly continued legato without distracting overlap.
2. The melody part should in general be played legato. But in order to emphasize the legato it is necessary to take "breaths" at the ends of phrases.
3. Passages involving duet harmony often require difficult modification of legato fingering. In this case it will be useful to practice these parts separately.



Staccato

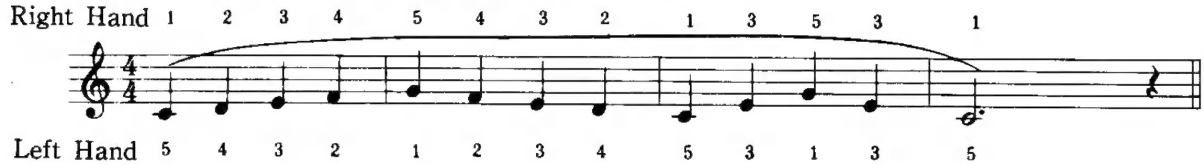
1. Since the duration of the note can be regulated very easily by the length of time the key is depressed, it is possible to obtain a wide variation in staccato treatment.
2. Generally a rhythm accompaniment with the left hand should be played staccato. A shorter staccato will generally be suited to rhythmical compositions while longer one to slow pieces. You should always try to choose the precise length that fits the work best.



Note : **The habit should be formed early of holding the hands correctly, and striking the keys to the bottom of their travel.**

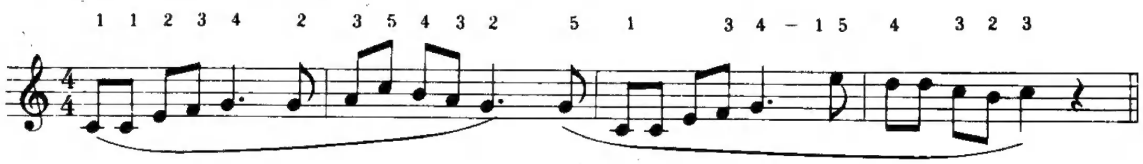
* In order to play ***Legato*** and ***Staccato***, the following techniques are often used and should be learned.

Exercise No.1 Legato (normal fingering)



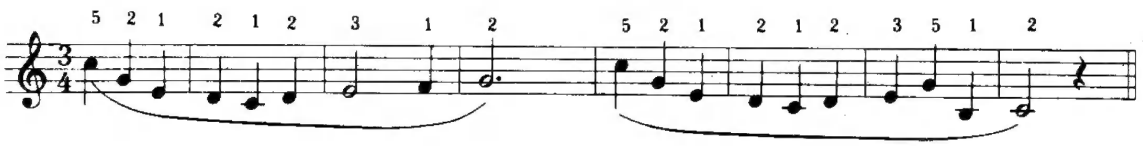
Exercise No.2 Legato (finger substitution)

While depressing a key, you keep one key activated without stopping by quickly substituting the finger on the key with another finger.



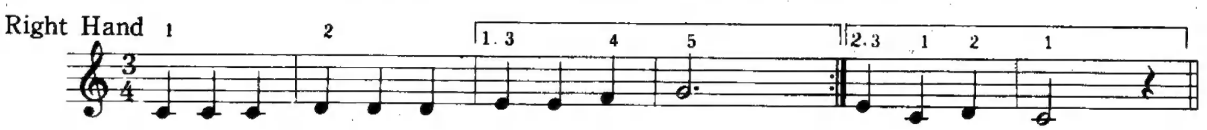
Exercise No.3 Legato (finger passing)

With one finger on a key, bring another finger over or under the first and depress the next key.

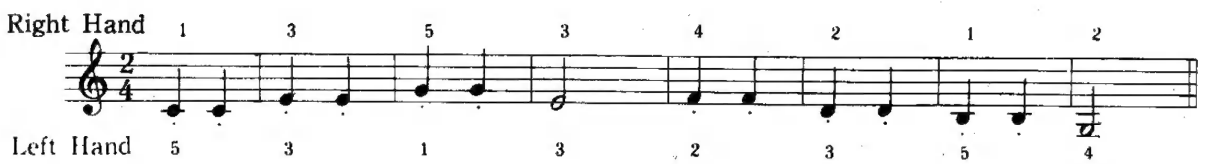


Exercise No.4 Depressing the same key successively several times

When you strike the same key repeatedly, don't remove your finger completely from the key, but practice striking it repeatedly as soon as the sound stops.



Exercise No.5 Staccato

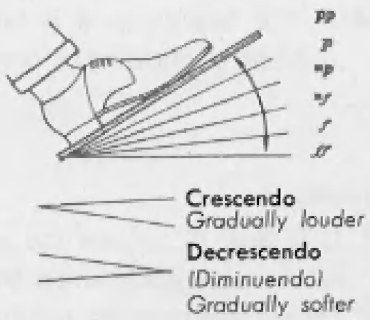


How to play the Pedals

1. Sitting always in the right and same position will enable you to play the correct pedal notes without looking at the pedals. (See *'Posture'* on page 24).
2. The best approach to the pedals is to allow the lower leg to swing freely from the knee.
3. Pedals should be struck with the light movement of the ankle.
   Be careful not to beat them with unnatural movement of your whole leg.
4. Do your best to achieve pedal playing without looking at the pedals as soon as possible.
5. Before commencing actual performance, it will be very effective to parctice rhythm and scale on the pedals. In pedal exercises, it will be helpful to give slightly greater tone lever emphasis to the pedals.
6. Flat and light shoes are desirable. It is not good to play pedals with high-heel.

How to use the Expression Pedal

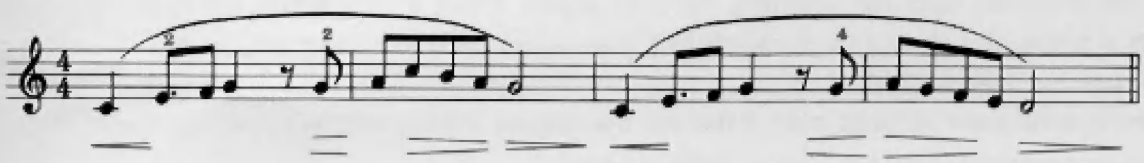
The Expression Pedal controls the volume of the Electone during performance within the overall range set by the Master Volume Control. It should be depressed gently for ***crescendo*** released gradually for ***diminuendo***. Please be careful to use this pedal with discretion. The expresison should follow the natural course of the work, and should never be intrusive.



In Phrasing

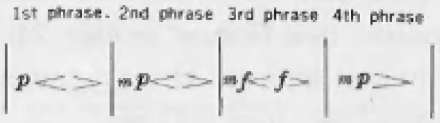
1. Natural phrasing usually indicates a soft entry to a passage and a subsequent softening at the end.
2. Variety of phrasing is attained with gradual, not sudden, movements of the Expression pedal.
3. The melody requires a 'songful' expression which can best be judged by paying close attention to the melodic line.
4. It is relatively easy to achieve a gradual ***crescendo***, but the gentle release of the Expression pedal in ***diminuendo*** requires more care.

Exercise No.6



Throughout a Composition

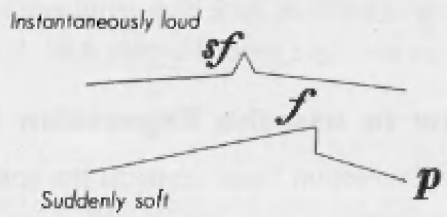
1. Each musical composition is composed of a number of phrases. A phrase marked *f* would be played somewhat more loudly; one marked *p* more softly. It is important to keep the overall balance in mind.
2. The full range of the Expression pedal should be used, but not so excessively that it becomes intrusive or unnatural.



Note: Unnatural sounds are the result of not using the right foot smoothly enough. Listen closely as you progress to eliminate these undesirable distractions.

Accent

1. Suddenly depressing the Expression pedal and them partially releasing it will add accent.
2. If accent is used too freely, its effectiveness will be diminished.
3. The pedal should be released smartly.
4. In the beginning, it is better to master the nuances of phrasing before attempting accent.



Note:

1. It is easy to achieve the proper crescendo when depressing the pedal, but it has a tendency to return too quickly unless this is prevented by careful use of the foot.
2. Do not give in to the temptation to accent one beat in every bar.
3. Crescendo passages should peak at the point where notation indicates.
4. At first, it is necessary to give conscious attention to expression, but practice is not sufficient until this aspect is entirely automatic and instinctive.
5. Even the same composition may require differing expressive treatment depending on the tempo at which it is played.
6. Rhythmical works will be enhanced with a little accent.
7. Expressive treatment can be truly effective only when the organist has truly grasped the essence of the composer's musical intention.

How to reset Levers, Controls and Selectors

When the notation calls for resetting the tone levers, effect elvers, effect controls, etc. midway through a piece, this should be accomplished with either hand as convenient, in such a way as not to interrupt the melodic line.

Changes in tone lever settings may influence the relative volume of the upper and lower manuals. This can be corrected using the Manual Balance Control.

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